CHAPTER NINE

CHESAPEAKE METROPOLIS, 1930 TO 1999

MAJOR DEVELOPMENTS

- ☐ The Depression era, 1930 to 1939
- ☐ Global war, 1939 to 1945
- ☐ Cold War, 1945 to 1989
- ☐ New World Economic Order, 1989 to 1999

SIGNIFICANT EVENTS

- ☐ Regional population reaches five million, 1930.
- ☐ Federal troops disperse the bonus marchers in Washington, 1932.
- ☐ Franklin Delano Roosevelt elected to his first term as president, 1933.
- ☐ The Social Security Act of 1935.
- ☐ World War II begins in Europe, 1939.
- ☐ Regional population nears the 5.5 million mark, 1940.
- ☐ America enters World War II on the side of the Allies, 1941.
- ☐ The Pentagon opens in Arlington, Virginia, 1942.
- ☐ Harry S. Truman becomes president following Roosevelt's death, 1945. World War II ends.
- ☐ The Cold War begins. Executive Order 9835 authorizes loyalty checks, 1947.
- ☐ Alger Hiss spy case, 1948 to 1950.

- ☐ Post-war migration and the baby boom cause regional population to jump to seven million in 1950.
- ☐ The Korean War is fought between U.S.-led U.N. troops and Communist North Korean and Chinese forces on the Korean peninsula, 1950 to 1953.
- ☐ Chesapeake Bay Bridge opens, 1952.
- ☐ Federal Interstate Highway Act of 1956.
- ☐ National Defense Education Act of 1958.
- ☐ The Economic Opportunity Act of 1964.
- ☐ American military involvement in Vietnam between 1965 and 1973.
- ☐ The Historic Preservation Act of 1966.
- ☐ Riots in Washington, Baltimore, and other Chesapeake cities, 1968.
- ☐ Amtrak established, 1970.
- ☐ Hurricane Agnes devastates the region, 1972.
- ☐ The Chesapeake Bay Bridge-Tunnel opens, 1973.
- ☐ OPEC oil embargo creates fuel shortages throughout the region, 1973.
- ☐ The Environmental Protection Agency establishes the Chesapeake Bay Program, 1983.
- ☐ The Cold War ends as the Soviet Union collapses, 1989.
- ☐ Regional population reaches 10.5 million, 1990.
- ☐ Regional population hits the twelve million mark, 1999.

AN ECOLOGY OF PEOPLE AND PLACE

People

The five million inhabitants of the Chesapeake Bay region faced a terrible paradox in 1930. On the surface, nothing seemed changed. Although population pressure had clearly left a mark on the region, fish still teemed in Bay waters, and farm fields still swelled with produce ready for market. The impressive technological advances that many believed would assure unending progress and prosperity had not disappeared. Yet for a second time in less than forty years, financial dealings and market forces beyond the average person's understanding had plunged Chesapeake Bay and the rest of the nation into a devastating economic downturn. This downturn is still known today as the Great Depression.

This depression was even worse than the one in 1893. Foreign markets collapsed as the American crash triggered a worldwide depression. Money and credit suddenly became hard to get. Factories, shops, and businesses closed, unable to raise capital or meet payrolls. Workers were fired and lost life savings as some banks failed and others foreclosed on heavily mortgaged homes, farms, and equipment.

The Depression hit hard everywhere in the Chesapeake Bay region. Tens of thousands of unemployed workers faced poverty in the cities and towns. Poor people in city tenements confronted the twin specters of homelessness and hunger. In the countryside, farmers and fishermen, making barely enough to live, struggled to hold on to their fields, boats, and implements. President Herbert Hoover's pleas for executives to hire back workers and increase production were ignored by corporations unable to sell products on depressed world markets.

As they did to Coxey's Army in 1894, federal troops scattered and burned a sprawling camp of twenty thousand destitute veterans in 1932. These veterans had marched on Washington to get an advance on bonus money promised for their war service.

Later that year, Chesapeake Bay voters showed that they had lost faith in government assurances that prosperity was just around the corner: They helped vote a new Democratic administration into office. Franklin Delano Roosevelt, the newly elected president, started federally funded New Deal public works projects and direct relief programs to lower unemployment, stimulate recovery, and help the neediest.

Workers employed by such new agencies as the Public Works Administration and the Civilian Conservation Corps began constructing or repairing highways, bridges, dams, and parklands throughout the Bay region and the nation. High tension lines soon carried electric current to rural towns and farms. This current was generated in new Piedmont hydroelectric complexes and coastal plain coal fired plants. Steam locomotives hauled the soft bituminous coal burned in these plants from mines in Maryland, West Virginia, and Kentucky on improved rail networks.

During the late 1930s, world tensions worsened. The pace of production in regional factories and shipyards increased as the federal government hurried to rearm the nation in response. Yet hard times were not over for all citizens. New Deal policies helped relieve the worst effects of economic stagnation, but they did not end the Great Depression. Lingering unemployment and worker unrest fueled fears of left wing communist and right wing fascist revolution. Unwilling to depend on the promises of politicians and corporate managers, more and more workers in and around manufacturing centers in Lancaster, York, Baltimore, and Washington joined industrial unions. With the strength of the unions behind them, they could strike for jobs, higher wages, and

better working conditions. But in more southerly parts of the region, workers did not join unions in large numbers, because they felt threatened by job loss and discouraged by the violence that authorities used to suppress strikes in areas believed to be more liberal, such as Pennsylvania's steel country and the Great Lakes industrial belt.

The outbreak of World War II in Europe in 1939 changed life in the United States dramatically. Although the nation remained neutral, President Roosevelt pledged to convert America into an arsenal of democracy. Programs such as Lend-Lease, which exchanged American weapons for access to British bases in the Western Hemisphere, strongly pushed military production. Higher wages, along with the draft deferments granted to workers in essential industries after the passage of the Selective Service Act in 1940, attracted men and women to war plants throughout the region.

Wartime mobilization in the United States followed the Japanese attack on Pearl Harbor on December 7, 1941. As far as the economy was concerned, this finally achieved what strikes and New Deal policies had failed to do. Although essential resources such as meat and gasoline were strictly rationed, economic conditions generally improved during the war years. Unemployment gradually disappeared when vast numbers of workers found jobs in industries that were changing to meet the military requirements of government contracts. Regional population swelled as hundreds of thousands of workers moved to Baltimore and other Chesapeake Bay locales to work in war plants manufacturing huge amounts of arms and munitions.

Massive steel aircraft carriers, fast cruisers, and hundreds of smaller ships of all sizes and descriptions came out of shipyards in Newport News, Norfolk, Annapolis, Washington, and Baltimore. Textile mills along the fall line in places like Richmond and Petersburg wove fabric for

uniforms and tents, and Virginia's coastal plain paper mills produced vast quantities of paper for the millions of documents and forms required to run the war effort.

Mobilization opened new opportunities for African Americans and women. A new generation of African Americans from rural areas moved to Chesapeake Bay cities and towns to work in war industries. And throughout the nation, huge numbers of women joined the workforce as millions of men were inducted into the armed forces. Thousands of women also volunteered to serve in newly organized support units such as the Women's Army Corps. Existing military bases were expanded and new ones were erected throughout the region. Hundreds of thousands of service men and women from all over the country trained in regional camps, airfields, and naval stations. Massive new administrative complexes and housing projects were constructed in and around Washington. The largest of the administration centers was the central military headquarters known as the Pentagon. It contained enough offices to accommodate thirty-five thousand military and civilian employees. It opened in Arlington, Virginia, in 1942 and is still the largest office building in the world.

Norfolk and Baltimore became major ports of departure for American forces bound for Europe and the Pacific. Many of the millions of men and women sent overseas during the fighting also reentered the nation through these ports after the war ended in 1945. Hundreds of thousands of American soldiers, sailors, and airmen had been killed and many more wounded, but the United States was the only major combatant whose homeland had not been devastated during the war. America held a world monopoly on nuclear weapons and had a newly developed military-industrial complex operating at peak capacity. In other words, the nation had grown into a superpower.

As it had done at the end of earlier wars, the government quickly ended rationing, and industry welcomed service personnel back into the civilian workforce. But the dawn of the nuclear age and the Soviet Union's development as a rival superpower compelled the government to break with the past in other ways. Although it had been forced to ally with the Communist Soviet Union during the war, the United States now feared the prospect of Soviet expansion abroad and communist activity at home. A new American administration, led by Harry S. Truman (the vice president who became president after Roosevelt died in office on April 12, 1945), worked with Congress to keep a careful watch on Soviet activity and to spend generous amounts on defense. Federal agencies grew in size and number in and around Washington. The various bureaus struggled to manage growing military funding and to oversee the new highway, airport, flood control, and other public works projects demanded by the public, who were tired of the scarcity of wartime and who had money to spend.

Because federal employees worked in a government system that only a few years ago had been openly allied with the Soviet Union and some employees might still be sympathetic to that country, there was concern about the possibility of a communist conspiracy. President Truman issued Executive Order 9835 in 1947, authorizing loyalty checks and establishing local loyalty review boards. Under the new policies, hundreds of government workers suspected of subversive leanings were fired from their jobs.

To expose those who were suspected and to unite the nation in a crusade against communism, the government held public hearings and show trials. The most famous of these began in 1948, when a former Communist Party member, Whittaker Chambers, appeared before the House Un-American Activities Committee to accuse Alger Hiss, a former State Department official and

presidential advisor, of being a communist agent. The evidence included some sensitive papers supposedly hidden in a suburban Washington pumpkin patch, which is now a National Historic Landmark. The Hiss case riveted the nation's attention on Washington as East-West tensions finally flared into what came to be called the Cold War. In 1948, Soviet forces blockaded Berlin in an attempt to force withdrawal of American, British, and French occupation troops. One year later, the Soviet Union exploded its first nuclear bomb. The Soviet nuclear threat and the Communist expansion in Eastern Europe, China, and the Korean peninsula created a great deal of fear in the United States. In Washington, politicians like Wisconsin senator Joseph R. McCarthy whipped those fears into anti-communist hysteria.

Newspapers, newsreels, radio, and, increasingly, television, carried news of these and other developments into homes throughout the Chesapeake region and the rest of the nation. Those who wanted to send a public message to the government took advantage of Washington's position as the symbolic and communications center of the nation. The Capitol Mall, Lafayette Park, and other open spaces in the capital became backdrops for mass marches supporting or protesting various causes or policies.

With advances in mass media and air travel and new construction of intra-coastal waterways and interstate superhighways, the United States was developing more of a national culture, and the growing Chesapeake Bay population was a part of that. Wartime research and Cold War defense budgets fueled advances in electronics, synthetics, and jet and rocket propulsion, which in turn boosted production and created new industries in the region and across the country. Postwar economic expansion also benefitted from the absence of significant competition from other

nations, as well as from the easy availability of cheap imports and the eagerness of recovering, war devastated foreign markets for American aid and exports.

The Chesapeake Bay regional population, which rose to nearly 5.5 million on the eve of American involvement in World War II, continued to grow in the postwar years. Some of the increase came through workers drawn to Chesapeake Bay war industries, who stayed in the area as the regional economy shifted to peacetime production. Vigorous public health programs administered vaccines, gradually eliminating ancient scourges such as polio, typhus, and diphtheria, which significantly lowered child mortality rates and increased overall health. The postwar baby boom also contributed to population growth. A new generation of young, upwardly mobile veterans married and began raising families. They were supported by G.I. Bill education benefits, medical services, and low-interest loans for homes, businesses, and farms. These families moved into homes of their own in rural districts, rented apartments in city neighborhoods, and flooded into new suburban developments in places like Bethesda, Towson, and Silver Spring.

Single story, ranch-style tract houses – mass produced and easily affordable by veterans taking advantage of government programs providing mortgages at low rates of interest – were built on small lots in closed, landscaped developments. These groupings of homes began to transform landscapes around Chesapeake Bay cities and towns. Shopping centers containing stores, diners, restaurants, movie theaters, and other services began to appear along nearby roads, in commercial districts known as strips. Large, enclosed shopping malls surrounded by huge parking lots first appeared in the region during the late 1960s.

Suburban, white-collar workers first rode to city jobs in inter-urban light rail cars, commuter trains, and buses. But they took to their cars as affordable automobiles, financed by low cost loans

offered by banks and finance corporations, poured off Detroit's production lines. Existing airfields, such as Washington's National Airport, were expanded, and such enormous new facilities as Maryland's Baltimore and Washington International Airport and Virginia's Dulles Airport were constructed. Because people chose to use roads and air lanes more and more often, passenger rail lines throughout the nation began to fail in the 1950s and 1960s.

In the cities, electrified trolley lines were replaced by buses powered by electricity, gasoline, and diesel. Lighter, cheaper, and more efficient diesel engines also replaced steam locomotives by 1960. Freight lines that served more northerly stretches of the Chesapeake Bay region shrank as competition from the trucking industry grew and demand for expensive hard anthracite coal collapsed. These included the Baltimore and Ohio, the Reading, the Erie, and the Pennsylvania railroads. Corporate mergers, diversification, and growing demand for the cheaper soft coal from West Virginia and Kentucky burned in coastal plain generating plants helped keep alive lines such as the Norfolk Southern and the Chesapeake and Ohio (now a subsidiary of a huge conglomerate, the CSX Corporation).

The growing numbers of cars and trucks traveled on improved existing highways, such as U.S. Route 1, and on new limited access freeways, such as Interstate 95. These roads dramatically transformed the regional landscape. First built during the 1930s, U.S. Routes were the nation's first highway system. Most featured two or three lanes of all weather, concrete paved roadways. Each ran on heavily graded roadbeds that cut through hills and other elevations and that crossed steel frame and reinforced concrete bridges and causeways spanning rivers, swamps, and valleys. Access to these roads generally was open, and signs and traffic lights controlled intersections and regulated movement.

Commerce and industry developed along stretches of U.S. Routes in and near cities and towns. New types of roadside establishments appeared, including diners, fast food stands, and motels. Owners used flamboyant, eye catching architectural signs and displays to draw in passing motorists. Many of these were made of newly available and extremely flexible materials such as aluminum and plastics. Entirely new forms of buildings appeared as business owners turned the very shapes of their establishments into advertisements. Buildings in the shapes of hamburgers, hot dogs, and ice cream sodas began to sprout up on the sides of regional roads.

After the Federal Interstate Highway Act of 1956 was passed, even larger divided highways – limiting access to controlled interchanges and permitting high speed travel unhampered by stop lights – were constructed. Unlike earlier roads, Interstates were entirely self enclosed, park-like landscapes cutting wide paths through cities and countryside. The absence of traffic lights and the wide, concrete and asphalt surfaced roadways, level grades, and gradual, gentle curves speeded traffic. Drivers could enter and leave the roads only at cloverleaf shaped interchanges. Gas stations, motels, restaurants, and, later, shopping centers and malls showed up more and more at these interchanges.

Road construction sparked several major engineering achievements in the region. The wide waters of the Bay itself were first bridged when the Chesapeake Bay Bridge was completed in 1952. It carries U.S. Route 50 across the narrows dividing Maryland's Eastern and Western Shores above Annapolis. In 1973, an even more impressive achievement was scored when the 17.6-mile Chesapeake Bay Bridge-Tunnel linked the Eastern Shore with the mainland at Virginia Beach. These and other bridges and tunnels replaced ferries and significantly reduced travel times. Corporations and factories began moving from cities – which were increasingly choked by truck

traffic and commuter gridlock – to spacious suburban grounds close to workers' homes. Urban business districts began to decay as growing numbers of enterprises moved to suburban shopping centers, supermarkets, and malls. These were conveniently located near major thoroughfares and surrounded by ample parking lots.

During the 1960s, Chesapeake Bay cities became sites of mass marches as civil rights demonstrations and Vietnam War protests swept the nation. Washington in particular became a symbolic focus of American political protest. Fine arts and popular culture still flourished in Chesapeake Bay cities, but urban sewage, roadway, and other infrastructure systems crumbled and services declined as taxpaying homeowners and businesses moved out. Soon, only poor people who could not afford to move remained in the region's dilapidated inner city neighborhoods. Puerto Rican, Cuban, and West Indian immigrants joined poor white and black residents living in the new urban ghettoes. Unemployment, illiteracy, alcoholism, drug addiction, and an enduring sense of hopeless despair grew. Some social scientists of the time called this a culture of poverty.

Washington, D.C., presented the clearest example of the chasm separating rich and poor in America's cities. The city boasted the highest per capita income levels in the nation. At its center lay the glittering stone buildings and monuments of the capital of the world's foremost superpower. Yet more than forty percent of the city's population lived below the poverty line in 1962, when Michael Harrington's influential book, The Other America, exposed the fact that forty million Americans suffered from the effects of hunger, joblessness, and substandard housing, education, and medical care. Mostly African American, Washington's poor lived in vast squalid, rundown, and rat infested ghettoes just beyond the gleaming city center.

Like many other city governments in the region and the nation, Washington officials tried to address the problems of urban decay by demolishing entire districts of rundown housing in urban renewal projects. Federal Great Society assistance programs, such as federal welfare, medicaid, and food stamps, failed to eliminate poverty. Anger in poor communities grew as people of minority groups carried an unequal share of the fighting in what many considered a colonialist war in Vietnam. Then the assassination of Martin Luther King, Jr. sparked riots during the summer of 1968. Rising up in frustration, inner city residents in Washington, Baltimore, and other American cities burned homes and businesses in their own neighborhoods.

Richard M. Nixon's election as president that year failed to end the war. The nation was already demoralized by urban turmoil and challenged by counterculture criticism of traditional values. So it reeled when American forces left Vietnam after of an inconclusive cease fire agreement was signed in 1973. One year later, Nixon became the first president in American history to resign from office in disgrace. Then the first OPEC oil embargo, in 1973-1974, caused an oil shortage that signaled the end of the era of cheap energy. Chesapeake Bay and the rest of the nation began to experience growing inflation, and economic recession followed.

Decline in the quality of American-made goods and rising demand for cheaper and better designed and engineered Japanese and West German imports meant that Americans bought more imported goods than they sold as exports. This dramatically increased American trade deficits. In 1970, ailing railroads turned their passenger service over to the federally administered National Rail Passenger System, commonly known as Amtrak. After drastically cutting service, Amtrak devoted most of its resources in the region to developing the moneymaking northeastern corridor route, which links cities between Washington and Boston.

Throughout the nation, corporations shut down plants and closed offices as profits declined. High inflation rates and soaring interest rates devastated productivity and lowered consumption. The situation became much worse when OPEC ministers cut oil production and raised prices more than three hundred percent in 1979. People throughout the region began to talk seriously about solar power and other energy alternatives to end dependence on prohibitively expensive and increasingly unreliable foreign oil supplies. The public was already worried about the dangers of nuclear technology, and the 1979 Three Mile Island reactor accident just north of the Chesapeake Bay heartland ended hopes that cheap atomic energy would be the answer. Diplomatic setbacks, such as the 444-day Iran hostage crisis, and unpopular political acts, such as President Jimmy Carter's 1977 decision to sign the treaty returning the Panama Canal to Panamanian sovereignty, further eroded people's confidence in their nation's future.

Chesapeake Bay voters helped elect Ronald Reagan president in 1980. They were responding to his pledges to restore American pride and revive the nation's depressed economy by abolishing restrictive government regulations, reducing taxes, ending deficit spending, and encouraging investment. Ironically, like Franklin Roosevelt before him, Reagan used federal funds to spend the nation out of recession. He began by repudiating the policy of détente, begun by Nixon, that maintained an uneasy coexistence with the Soviet Union. Committing the nation to victory in the Cold War, Reagan started an aggressive program of spending to rebuild the nation's military establishment. Orders for a modernized navy of six hundred ships restored activity in Chesapeake Bay shipyards. Newly manufactured interceptors and bombers crowded onto the flight lines of Andrews Air Force Base and other facilities in and around Washington. Laboratories in Maryland and Virginia received billions of research dollars to develop the Strategic Defense Initiative. This

space based anti-missile system, popularly known as Star Wars, was to be capable of shielding the nation from ballistic missile attack.

Dramatic developments in electronic automated technologies during the 1980s further spurred productivity in the region. The collapse of the Soviet Union, which had been bankrupted by the Cold War arms race, opened formerly closed international markets and encouraged increased production of goods for domestic and foreign markets. The pace of recovery quickened as a result. Overall regional population also rose dramatically, increasing from nine million to more than twelve million people between 1970 and 1999.

Revived by the national economic recovery, Chesapeake Bay corporations worked with city governments and community activists to redevelop rundown downtown districts and restore poverty blighted neighborhoods. Baltimore's Inner Harbor development encouraged construction of new high rise office buildings, lured tourists to new attractions such as the National Aquarium, and attracted young families to restored townhouses in newly gentrified neighborhoods. In Washington, renovated landmarks, such as Union Station, and massive new construction revived the city center. Similar developments in other Chesapeake cities show the remarkable economic recovery that has stimulated growth throughout the region at the close of the twentieth century.

Place

The dramatic changes outlined above have left a seemingly permanent mark on Chesapeake Bay lands, waters, and skies. The overall number of people living in the Chesapeake Bay region more than doubled in this period, from five million in 1930 to the present population of more than twelve million. Much of this growth, and the development accompanying it, has happened in the

major suburban complexes surrounding Baltimore and Washington, in the smaller Richmond and Hampton Roads metropolitan areas, and around freestanding towns such as Lancaster and York, Pennsylvania.

Although Washington continues to limit the height of its buildings, skyscrapers today rise into the skies above most other Chesapeake Bay downtown districts. Glass clad towers also cluster together in suburban office parks and around Dulles, BWI, and other regional airports and transportation centers. Long ribbons of highway link suburban residential developments, commercial strips, and industrial parks that sprawl across former wetlands and farm fields. Intensive development, spurred by population growth and changing real estate values, has changed as much as seventy percent of the total land area in regional metropolitan centers. Overall, agricultural, residential, and industrial development has affected more than forty percent of all lands in the region.

The environmental effects of this development have been dramatic. Wetlands, which had long been thought of as breeding grounds for disease and as waste lands best used as garbage dump and landfill sites, have been particularly hard hit. The 1.2 million acres of wetlands remaining in the region today represents only a fraction of former acreage.

Chesapeake Bay continues to be one of the nation’s busiest and most economically important maritime corridors. A workforce of 17,000 watermen and women working on Bay waters annually catch and process one-quarter of all oysters and one-half of all clams consumed in America. The yearly haul of ninety-five million pounds of blue crabs is the largest such harvest in the world. Bay waters support an active sport fishery and provide recreation to millions of bathers

and boaters. Bridges and boats allow penetration of formerly remote parts of the Bay, which has sparked tensions between fishing and tourism interests.

More than ten thousand oceangoing vessels carry a hundred million tons of cargo every year to port facilities at Baltimore, Hampton Roads, and smaller harbors. Sheltered anchorages at the mouth of the region's rivers require constant dredging, which is shown by the number of former Bay ports that no longer exist. The Bay's already shallow waters also require periodic dredging to keep shipping lanes open. Although channel clearing has high costs in money and environmental effects, to many people the Bay's economic importance as a major trade corridor justifies the expenses. Waterborne commerce accounts for one-fifth of all jobs in Maryland and fifteen percent of the state's gross national product. Farther south, the Newport News Shipyard is Virginia's largest employer.

The first half century of metropolitan development created pollution, overexploitation, and environmental degradation that had effects still felt today. Between 1930 and 1980, easterly winds carried airborne pollutants that billowed from chimneys of coal fired generating plants, steel mills, and other smokestack industries in the nation's heartland. These pollutants spread an uncontrolled pall of acid rain over the region's lands and waters. During this same period, unregulated industries from as far north as central New York and as far west as West Virginia poured untold quantities of heavy metals, petrochemicals, hydrocarbons, mining wastes, and other synthetic non-biodegradable pollutants that do not break-down naturally into streams flowing into Chesapeake Bay. So much anthracite coal waste was dumped into the Susquehanna river at Scranton, for example, that it has become economically feasible to dredge coal from sediments trapped within the still waters impounded by the Conowingo and other lower river dams.

Eroded soils and vast amounts of nitrogen, phosphorus, and synthetic chemicals used in pesticides and fertilizers washed from farm fields. Individual homes and entire municipalities pumped human waste, detergent phosphates, and other sewage into regional rivers. Passing ships discharged oil and other wastes into open Bay waters, introducing foreign diseases and pests along with the pollution and posing a constant threat of catastrophic spills and leaks. Toxic chemicals such as kepone and pesticides such as DDT killed off bald eagles in the region and devastated other species. Some newly introduced species, such as nutria, brought into the region to provide a new source of fur and flesh, grew to such large populations that they threatened established animal communities. Over-hunting and industrialized commercial harvesting threatened the survival of Bay shellfish, fin-fish, and wildfowl.

Environmental conditions in the Chesapeake Bay region had deteriorated alarmingly by 1970. Vast areas seemed covered by pavement and unsightly development. The region’s old-growth forests were gone – replaced by human habitations, highways, farm fields, or pines planted for quick harvest. Smog choked city skies and acid rain threatened to turn formerly thriving regional lakes into lifeless lagoons. Water pollution was so bad in major regional waterways that the Susquehanna, Potomac, and James rivers seemed little more than open sewers. Numbers of shad dropped dramatically after construction of dams across the lower Susquehanna blocked the shad's spawning runs. Bay wildlife lost essential habitat as increasing amounts of wetlands were drained and buried under dumped garbage, dredged materials, and other landfill.

The open waters of the Bay also showed unmistakable signs of devastation. Over-harvesting threatened most economically important fish, shellfish, and wildfowl. Oyster and softshell clam production plummeted when newly introduced diseases ravaged shellfish communities. Red tides,

algae and plankton blooms, and noxious chemicals poisoned the Bay as murky waters, clogged with sediment, blocked life-giving sunlight. Recovering from devastation caused by newly introduced foreign plant diseases during the early 1930s, eel grasses and other water plants providing food and shelter to numerous species were increasingly crowded out by sudden expansions of hydrilla and Eurasian watermilfoil. Abrupt increases in the salt levels of Bay waters, for example, allowed watermilfoil to expand explosively, covering almost 50,000 acres of Bay bottom in 1960 and twice as much acreage one year later. Although local environmental conditions hostile to their growth caused watermilfoil plants to die off within a year of their appearance, their sudden and catastrophic expansion left an enduring mark on Bay water plant life. A survey conducted in 1978, for example, found that only 40,000 acres of Bay bottom remained covered by submerged aquatic vegetation of any type.

Water plants starved for light in cloudy Bay waters. Periodic catastrophes, such as Hurricane Agnes, which hit the region in 1972, also washed away entire communities of submerged aquatic vegetation. Destruction of oxygen producing plants combined with the oxygen robbing process of decomposition to create a condition known as anoxia, a lowering of the volume of dissolved oxygen in the water. Because oxygen is needed to support aquatic life, the lack of it increased the loss of plant life.

Commercial catches of striped bass dropped from fifteen million to two million pounds per year in a single decade. Knowing that ninety percent of striped bass on the east coast spawned, matured, and fed in the Bay, the alarmed Maryland authorities banned all fishing of striped bass in state waters. Virginia also moved to limit catches of threatened species.

Concerned about both the long term degradation of the regional environment and the sudden and enormous devastation caused by Hurricane Agnes, many Chesapeake Bay residents welcomed passage of the Federal Clean Water Act in 1972. The act established uniform water quality standards, placed limits on types and amounts of pollutants poured into rivers, and required construction of new sewage lines and water treatment plants. One year later, Senator Charles Mathias of Maryland began supporting studies to assess the impacts of industry, municipal governments, agriculture, development, and rising population on the Chesapeake Bay environment.

The findings from these and other studies led the U.S. Environmental Protection Agency to establish the Chesapeake Bay Program in 1983. This innovative partnership coordinated the efforts of government agencies, preservationists, and concerned citizens in the 64,000 square mile Chesapeake Bay basin. The program provides technical assistance, research support, and a forum for airing issues relating to the maintenance and restoration of the region's environment. Program partners have pledged to work together to reduce industrial pollution, increase acreage covered by wetlands and submerged aquatic grasses, restore plant and animal communities, and help farms and municipalities reduce the amount of nutrients flowing into Bay waters by forty percent by the year 2000.

Several major successes have been scored since 1983. Bald eagle populations rebounded significantly between 1989 and 1999. Releases of chemicals from factories, sewage systems, and farm fields decreased more than fifty-five percent during the same period. Careful management of fertilizers, insecticides, and sewage is producing significant declines in harmful mineral and nutrient concentrations in Bay sediments and waters. Removal of low dams and obstructions have

reopened hundreds of miles of freshwater streams to spawning anadromous fish. And acreage covered by submerged aquatic grasses has increased more than sixty percent since 1984.

Federal, state, and municipal laws and ordinances currently give varying levels of protection to threatened cultural and natural resources in the region. The region currently has seventy state parks and forests, fifty state game lands and wildlife management areas, forty-two national parks, sixteen military installations, ten national wildlife refuges, and two Department of Agriculture facilities (the George Washington National Forest, in Virginia, and the National Agricultural Research Center, in Maryland). The personnel at these sites work vigorously to enforce protective regulations on more than one million acres of public land in the Chesapeake heartland. Public utilities and private organizations are increasing forming partnerships with agencies at all levels of government to restore the environment.

Although these and many other improvements provide good reasons to be optimistic about the restoration of the environment, much remains to be done. High nutrient levels in Bay waters, which are believed to be responsible for turning a usually harmless microscopic dinoflagellate named pfisteria into a highly toxic killer of fish in 1997, must be reduced. Increases in development rates lead to corresponding decreases in forest acreage and waterfowl habitat, showing how humans can transform the environment. Because of this impact, people must care for their environment as they work to build strong futures for themselves, their families, and their communities.

EMERGENCE OF A METROPOLITAN CULTURAL LANDSCAPE

Peopling Places

Population rise and redistribution have had dramatic impacts on the regional cultural landscape during this period. As people were drawn to the region's cities in search of employment during the Depression, the growing population prompted more expansion of concentrated downtown administrative and business districts. Growth required the construction of expanded public transportation systems and the massive development of city services and utilities. Although the economic slump hampered development, existing shopping and entertainment districts were enlarged. Private apartment blocks, townhouses, and residences also were constructed or renovated. Urban power and water authorities, struggling to meet the needs of growing populations, constructed dams, reservoirs, and generating plants in rural parts of southeastern Virginia's coastal plain and the Maryland Piedmont.

Wartime development stimulated growth in the Washington metropolitan area and in urban centers containing large war industries. Although Washington continued to grow dramatically after the war, urban development elsewhere in the region began to slow during the 1950s and 1960s. Population profiles in city centers began to change as businesses and jobs moved out to the suburbs. City populations became poorer. Development in cities increasingly shifted from construction of new business buildings to erection of publicly funded housing projects and other programs providing affordable housing to low income families.

The focus of private development shifted to the rural areas surrounding regional cities as rising regional populations relocated to new suburbs. Many older rural villages became suburban enclaves. Entirely new communities also rose up everywhere in the region. Buying up available

farmlands and filled wetlands, developers dropped clusters of mass-produced residences onto landscaped tracts. Schools, gas stations, fire houses, diners, drive in movies, and quickly constructed shopping centers surrounded by paved parking lots soon appeared nearby. Local governments, unwilling to limit additions to their tax rolls, did not regulate this suburban development, and at first it proceeded haphazardly.

Alarmed by the sprawling, unsightly landscape resulting from unplanned development, communities quickly began to put zoning regulations in place. Ordinances soon set limits on housing lot sizes, determined where businesses could be operated, mandated that structures be set back certain distances from roadways, and required adequate parking.

New mini cities of steel framed, glass clad high rises sprouted up at the cores of new suburban concentrations in places such as Arlington, Columbia, Bethesda, and Silver Spring during the 1970s. Larger and more imposing skyscrapers appeared in rehabilitated waterfront downtown districts such as Baltimore's inner harbor as the economy began recovering during the 1980s. Drawn by the region's healthier economy, new generations of Asian, African, and Latin American immigrants established new communities in old residential districts in Chesapeake Bay cities and towns by the 1990s. Signs in their native languages that marked churches, gathering places, and business establishments added new diversity to the region's cultural landscape.

Creation of Social Institutions

Massive social change and mobility marked the years of this period. As more people acquired cars, many established neighborhood communities were transformed and new ones created. Increased prosperity in the years after the Great Depression brought an era of social mobility

unlike any before. Substantial numbers of working class people, employed in regional industries and supported by programs such as the G.I. Bill, saw their children enter the ranks of the middle class. Increased educational opportunity and longer periods of education allowed people to train for new, highly skilled jobs. They also delayed some workers' entry into the workforce, which prevented flooding of the labor market. As women fought for equal rights and equal pay and groups who had suffered racial or ethnic bias fought against laws enforcing statutory segregation and racial discrimination, new opportunities opened for them.

Changing patterns of work and employment transformed family dynamics everywhere. The cost of living rose as living standards improved, and households soon required incomes from all adult residents. Divorce rates rose as economic opportunities and changing values made it seem more plausible for people to live alone. Residence sizes reflected this trend, generally becoming smaller as smaller nuclear, one parent, and single households replaced earlier multi-generational families.

The movement of hundreds of thousands of migrants from other parts of the country and the world to a new region where most were strangers increased reliance on services provided by churches, philanthropic societies, social clubs, and other community social institutions. Many old institutions closed or relocated. New and old ethnic, religious, and cultural associations renovated or erected new community centers, meeting halls, recreational facilities, hospitals, rest homes, and cemeteries throughout the region. Inspired by the civil rights and red power movements, Native American people throughout the region began reasserting their cultural identities .

Government played a greater part in social life during this period. Passage of the Social Security Act in 1935 created the nation’s first social welfare system. Taxes paid by employers and

withheld from employee wages helped fund a plan that provided unemployment compensation, aid for the infirm and for dependent mothers and children, pensions, and payment to survivors' families. Because it gave benefits to workers, the Social Security system did not help a new generation of poor people who were unable to find work during the prosperous postwar decades.

In 1964, President Lyndon Baines Johnson moved to address this new form of poverty by sponsoring passage of the Economic Opportunity Act, which extended medical services and financial relief to the needy. Passed at a time when the nation found itself drifting toward war in Vietnam, this centerpiece of Johnson's ambitious Great Society program helped millions of people. But it did not end poverty. Congress was unwilling to raise taxes to the level needed to simultaneously fight the war on poverty, the Cold War, and the fighting in Vietnam. So it failed to raise the funds needed to establish long term programs that could wipe out need in American society.

But public monies did underwrite a massive school building program throughout the 1960s. State colleges and universities were enlarged and expanded. Community colleges were built in many counties. New commuter campuses emerged in Chesapeake Bay cities. And public and private funds also supported construction of new meeting halls, conference centers, and other community social facilities.

New community self help programs were created to address social problems when the federal government moved to limit its involvement in social welfare programs during the 1980s. Workfare began to replace welfare as the federal government turned over control of relief programs to the states. Federal intervention in social life further diminished as agencies increasingly worked to

create partnerships, such as the Chesapeake Bay Program, to coordinate the voluntary efforts of state governments, municipalities, service organizations, private corporations, and individuals.

Expressing Cultural Values

The Chesapeake Bay region became a center of American cultural expression in the decades following 1930. Although New York and Hollywood had become centers of American style, Washington's monuments, meeting halls, and mall had become stages on which policymakers, trend-setters, and demonstrators set much of the cultural tone of the nation. This tone has shifted continually, from the self righteousness of the Progressive Era, through the hardheaded practicality and naive idealism of the Depression and war years, the self assuredness of the Cold War, the turbulent changes of the 1960s, and the rise of identity politics pressing agendas of particular ethnic groups, religious viewpoints, and gender orientations, to the present struggle to find a place in the emerging new world economic order.

Chesapeake region newspapers carried the latest news, as well as the views and opinions of influential writers such as Art Buchwald. The Watergate scandal and the popular film, All the President's Men (1976), helped propel the Washington Post into national prominence. Washington also became the scene of countless novels and the backdrop of hundreds of filmed dramas, thrillers, mysteries, and comedies.

Motion pictures have also helped Baltimore emerge as a unique icon of popular imagination. Director Barry Levinson brought a wistfully nostalgic vision of the city to life in films, such as Diner (1977) and Avalon (1990). More recently, Levinson has helped illuminate a grittier side of Baltimore life in the critically acclaimed television show Homicide (1992-1999). On the less

mainstream side, film-maker John Waters has created an image of Baltimore as a weirdly sweet working-class paradise in films, such as Pink Flamingos (1972), Hairspray (1987), and Pecker (1998).

Popular culture also flourished in more rural areas of the region. Radio and the rising recording industry helped country music grow in popularity. Carved wooden decoys grew from everyday tools into a highly marketable art form. Collectors and curators from Baltimore, Washington, and other urban increasingly scoured the region's hinterlands in search of antique or homemade furniture, furnishings, paintings, and other folk arts. The Waltons, a popular television show aired from 1972 to1981 brought Virginia screenwriter Earl Hamner Jr.s' vision of an idealized close knit rural family to American audiences at a time when political conflict threatened to tear apart the nation's cultural fabric. Popular culture also was expressed in sports stadiums, playing fields, folk art, furniture facades, painted screens, stoop culture, and urban mural painting.

Museums, conservatories, theaters, auditoriums, and schools supported the fine arts in the region's cities and universities. Regional architects, writers, and artists created structures, objects, and landscapes reflecting a range of cultural tastes. Styles have ranged from the streamlined lines of the art deco and art moderne styles of the 1930s, through the realism of the war years, the abstract expressionism of the postwardecades, and the futuristic simplicity of the modernists during the 1960s and1970s, to the mix of old and new favored by the postmodernist movement of the 1980s and 1990s.

A yearning for simpler times and values has been reflected in the colonial revival and historic preservation movements. During the 1930s, financier John D. Rockefeller poured millions of dollars into restoration of Colonial Williamsburg. Places significant in American history, such as

Jamestown, Yorktown, Gettysburg, and the C & O Canal, became national parks. The Historic Sites Act of 1935 established the National Historic Landmark program. Since that time, more than one hundred sites of national significance in the region have been designated as landmarks through the program. Passage of the Historic Preservation Act of 1966 established State Historic Preservation Offices in every state and created the National Register of Historic Places to recognize sites of local and state significance. To date, more than a thousand places in the region have been listed in the National Register.

Shaping the Political Landscape

A growing centralization of authority was required to regulate the vastly increasing, unprecedentedly mobile, consumption oriented, and rapidly changing populations. Stone masons working in regional quarries cut marble, granite, and sandstone to adorn the facades of the increasing number of classical revival office complexes and gleaming monuments that rose at the center of Washington during the 1930s. Elsewhere in the region, federal public works projects funded road, dam, and park construction. Federal office buildings housing employees administering these and other programs rose in centrally located county seats.

During World War II, armies of framers, roofers, carpenters, plumbers, brick masons, and sheet metal workers built a huge number of barracks, warehouses, administrative complexes, and other structures in military bases and depots throughout the region. Constructed with inexpensive materials from standardized plans, most of these buildings were built for a specific purpose and were slated for demolition following the end of hostilities. Most, however, were maintained as growing tensions with the Soviet Union compelled the government to keep its bases open after

1945. The government increasingly used defense needs as justification for new public works and development projects. New limited-access superhighways funded through the 1956 Interstate Highway Act, for example, were made part of what came to be called the National Defense Highway System. U.S. Army Corps of Engineers contractors undertook numerous flood control and waterfront stabilization projects to protect American production centers and safeguard strategic resources.

Even education came to be regarded as a weapon in the Cold War. Citing the need for larger numbers of technicians and scientists to produce and operate sophisticated weapons systems, Congress passed the National Defense Education Act in 1958. Low interest student loans, research grants, and other funding provided by the act soon led to great growth in college campus construction. Established campuses were expanded, and new ones opened everywhere in the region.

Many new or expanded colleges occupied military bases that had been turned over to state and local governments for reuse. Barracks and other structures were converted into classrooms, dormitories, and administration buildings. In state capitals, county seats, and other administrative centers, new assembly halls, court houses, office buildings, fire houses, and recreational facilities rose as city populations began spilling into growing suburbs throughout the region. Federal money funneled to local communities to fight wars on poverty, crime, and drugs built new health centers, police stations, prisons, and other facilities.

Developing the Chesapeake Economy

Unprecedented demographic, social, cultural, and political transformations led to revolutionary changes in the economy of the region. Despite depression and periodic economic downturns, producers and wholesalers brought ever-larger amounts of goods to growing markets in and beyond the region by using more efficient and productive extraction, processing, manufacturing, and distribution systems. New rail, surface, water, and air transportation systems could carry larger cargoes to markets faster and more efficiently. That made possible the import and export of greater amounts of durable goods. New preservation and storage techniques allowed greater stockpiling and wider distribution of perishable produce. Greater quantities of goods crowded onto shelves of growing numbers of specialty shops and ever larger and more complex department stores. Imposing glass and steel office buildings rose in urban and suburban centers as corporations and financial institutions grew in size and influence.

Expanding Science and Technology

The political economy of the period provided support for extraordinary scientific and technological expansion. Financed by government funds, encouraged by industries hungry for innovation, and stimulated by developments elsewhere, Chesapeake Bay region scientists and technicians made contributions that left a lasting impact on the regional cultural landscape. Scientists working in universities, military laboratories, and federal research facilities in and around the Baltimore-Washington corridor made breakthrough discoveries in physics, chemistry, and electronics. These and other discoveries permitted development of radical new technological advances such as the transistor, jet and rocket reaction propulsion engines, nuclear power generation, and plastics, rayon, dacron, nylon, and other synthetics. At facilities such as the

Aberdeen Proving Grounds and Patuxent Naval Air Station in Maryland and Virginia technological centers such as Fort Langley and the Atomic Energy Commission's Continuous Electronic Beam Accelerator Facility in Newport News, technicians continue to perfect technologies that apply the results of pure scientific research. The national Emergency Medical System is an example of the kind of practical application of basic research first developed in the region.

Transforming the Environment

A population socially, culturally, and politically committed to the idea of progress and development was able to transform Chesapeake Bay environments in ways their ancestors would not have thought possible. Because wood has become less economically important and agricultural production has decreased, the total number of acres covered by forest cover has increased. But most other environmental indicators in the region have clearly shown signs of significant degradation since 1930. Most analysts agree that pollution, overexploitation, and development have been the primary causes of this disturbing trend. Poisons and sediment flowing into the Chesapeake from the Susquehanna River, for example, have all but wiped out submerged aquatic vegetation in northern parts of the Bay and have seriously reduced it farther south. Over-harvesting and habitat destruction have significantly reduced annual hauls of oysters, clams, and fin-fish. Pesticides and indiscriminate over-hunting have threatened the survival of hawks, owls, eagles, waterfowl, and other birds. Numbers of fur bearing otters, beavers, and minks have shrunk catastrophically, and only small numbers of bears, bobcats, and other wildlife survive in remote portions of the Great Dismal Swamp and isolated sections of the upland Piedmont.

Vast expanses of land in and around regional cities and suburbs have been buried beneath landfill or covered with pavement. Enormous tracts of low lying fertile bottomlands have been covered by waters rising behind dams built by power utilities and water companies throughout southeastern Virginia and the Maryland Piedmont. Toxic waste dumps poison land near many old industrial sites, and layers of heavy metals, chemicals, and nutrient runoff still leach into Bay waters from buried sediments. At the same time, rates of cancer higher than ever recorded before have been reported throughout the region.

Greater awareness of the effects of these environmental transformations has sparked efforts to reverse their impacts since the 1970s. Today, strict federal and state environmental laws require that environmental impact be considered for all projects funded with federal dollars or located on lands that federal agencies own or regulate. Other laws require cities to lower smog producing ozone and hydrocarbon emissions and mandate treatment of water prior to its discharge into waterways lands. And public-private partnerships such as the Chesapeake Bay Program coordinate efforts to further lessen the impact of non-biodegradable pollutants, restore damaged habitats, open closed streams to spawning fish, reinvigorate submerged aquatic vegetation, reintroduce bald eagles and other species that have been wiped out, and promote development in harmony with the region's environment.

Changing Role of the Chesapeake in the World Community

Visible evidence of America's changing role in the world community has become a key part of the region's cultural landscape. Washington's role as the cosmopolitan capital of the world's strongest superpower is shown in its buildings and in its monuments that commemorate great

events and honor influential people . The capital district's differences between rich and poor are reminders of similar contrasts between developed and undeveloped nations.

Army, Navy, Marine, and Air Force bases throughout the region support forces required to project military power throughout the world. The Bay's importance as a major maritime trade center is shown by its massive port facilities, surviving examples of watercraft constructed in the region, such as the World War II liberty ship John Brown - first built and now preserved as a historic site commemorating the contributions of the nation's merchant mariners in its home port of Baltimore - and well marked and maintained shipping lanes. Jet aircraft flying in and out of Baltimore-Washington, Dulles, and other international airports bring the region within a few hours' flying time of the rest of the world. Throughout the region, microwave dishes mounted atop steel towers and mobile vans link the region into a global satellite communication network, putting people into instant contact with one another everywhere on the planet. Larger radio telescopes maintained at civilian and military research centers reach ever farther into deep space, searching for new discoveries that promise undreamed of reconsiderations of the nation's, and the world's, position in the universe.

KEY LOCALES

National Historic Landmarks

District of Columbia
- Constitution Hall [1924-1930]
- Supreme Court Building [1935]

Maryland
- Elmer V. McCollum House [ca. 1920], Baltimore City
- Spacecraft Magnetic Test Facility [1966], Prince George's County
- U.S.S. Torsk [1944], Baltimore City

Pennsylvania

Dwight D. Eisenhower Farmstead [1950s], Adams County

Virginia

Charles Richard Drew House [1920-1939], Arlington County
Eight-Foot High Speed Tunnel [1936-1956], Hampton City
Gerald R. Ford, Jr. House [1955], Alexandria City
Fort Myer Historic District [1900s], Arlington County
Full-Scale Tunnel [1931], Hampton City
Hampton Institute [1868-present], Hampton City
Jackson Ward Historic District [19th-20th centuries], Richmond City
Lunar Landing Research Facility [1965-1972], Hampton City
Robert R. Moton House [1935], Gloucester County
Quarters 1 [1899], Arlington County
Virginia Randolph Cottage [1937], Henrico County
Rendevous Docking Simulator [1963-1972], Hampton City
Spence's Point, John R. Dos Passos Farm [1806, 1940s], Westmoreland County
Variable Density Tunnel [1921-1940], Hampton City

FURTHER INFORMATION

Books and Articles

These are foremost among the many sources containing useful information surveying this period in Chesapeake Bay history:

Carol Ashe, *Four Hundred Years of Virginia, 1584-1984: An Anthology* (1985).
Carl Bode, *Maryland: A Bicentennial History* (1978).
Daniel J. Boorstin, *The Americans* (1973).
John Bowen, *Adventuring in the Chesapeake Bay Area* (1990).
Robert J. Brugger, *Maryland: A Middle Temperament, 1634-1980* (1988).
Suzanne Chapelle, et al., *Maryland: A History of Its People* (1986).
Frederick A. Gutheim, *The Potomac* (1968).
Alice Jane Lippson, *The Chesapeake Bay in Maryland* (1973).
Paul Metcalf, editor, *Waters of Potowmack* (1982).
Lucien Niemeyer and Eugene L. Meyer, *Chesapeake Country* (1990).
Edward C. Papenfuse, et al., *Maryland: A New Guide to the Old Line State* (1979).
Morris L. Radoff, *The Old Line State: A History of Maryland* (1971).
Emily J. Salmon, editor, *A Hornbook of Virginia History* (1983).
Mame and Marion E. Warren, *Maryland: Time Exposures, 1840-1940* (1984).
John R. Wennersten, *Maryland's Eastern Shore: A Journey in Time and Place* (1992).
Dan White, *Crosscurrents in Quiet Water: Portraits of the Chesapeake* (1987).

Useful environmental surveys include the following:

Michael A. Godfrey, *Field Guide to the Piedmont* (1997).
J. Kent Minichiello and Anthony W. White, editors, *From Blue Ridge to Barrier Islands* (1997).
William C. Schroeder and Samuel F. Hillebrand, *Fishes of Chesapeake Bay* (1972).
Christopher P. White, *Chesapeake Bay: A Field Guide* (1989).
David A. Zegers, editor, *At the Crossroads: A Natural History of Southcentral Pennsylvania* (1994).

The following sources represent only a tiny fraction of the many planning and technical reports prepared since the Chesapeake Bay Program began in 1983:

Richard A. Batiuk, et al., *Chesapeake Bay Submerged Aquatic Vegetation Habitat Requirements and Restoration Targets* (1992).
Richard A. Cooksey and Albert H. Todd, *Conserving the Forests of the Chesapeake* (1996a).
-----, *Forest and Riparian Buffer Conservation* (1996b).
Steve Funderburk, et al., *Habitat Requirements for Chesapeake Bay Living Resources*(1991).
-----, *Chesapeake Bay Habitat Restoration* (1995).
Jack Greer and Dan Terlizzi, *Chemical Contamination in the Chesapeake Bay* (1997).
Interstate Commission on the Potomac River Basin, *A Comprehensive List of Chesapeake Bay Basin Species, 1998* (1998).
JMA/Watson, *Lower Susquehanna Heritage Area Feasibility Study* (final draft, 1998).
K. Bruce Jones, et al., *An Ecological Assessment of the United States Mid-Atlantic Region* (1997).
Kent Mountford, Charles D. Rafkind, and John Donahue, editors, *The Chesapeake Bay Program: Science, Politics, and Policy* (1999).
National Park Service, *Chesapeake Bay Study* (draft, 1993).
Robert J. Orth, et al., *1995 Distribution of Submerged Aquatic Vegetation in the Chesapeake Bay* (1996).
Kathryn Reshetiloff, editor, *Chesapeake Bay: Introduction to an Ecosystem* (1995).
James P. Thomas, editor, *Chesapeake* (1986).

Useful atlases and geographic surveys graphically depicting large scale patterns of Chesapeake Bay cultural landscape development of the period include these:

Michael Conzen, editor, *The Making of the American Landscape* (1990).
David J. Cuff, et al., *The Atlas of Pennsylvania* (1989).
James E. DiLisio, *Maryland, A Geography* (1983).
D. W. Meinig, *The Shaping of America* (Vol. 2, 1986).
Helen Hornbeck Tanner, *The Settling of North America* (1995).
Derek Thompson, et al., *Atlas of Maryland* (1977).

Kent T. Zachary, *Cultural Landscapes of the Potomac* (1995).

Individual small scale community studies include:

Boyd Gibbons, *Wye Island: Outsiders, Insiders, and Resistance to Change* (1977).
Jack Temple Kirby, *Poquosson* (1986).

Biographical accounts providing insights into individual lives include:

Lila Line, *Waterwomen* (1982).
Randall S. Peffer, *Watermen* (1979).
John Sherwood, *Maryland's Vanishing Lives* (1994).
William W. Warner, *Beautiful Swimmers: Watermen, Crabs, and the Chesapeake Bay* (1976).

Cultural life of the period is examined in:

Esther Wanning, *Maryland: Art of the State* (1998).

Examples of the many studies surveying key aspects of social life of the period include:

Dieter Cunz, *The Maryland Germans* (1948).
Mary Forsht-Tucker, et al., *Association and Community Histories of Prince George's County* (1996).
Ronald L. Heinemann, *Depression and the New Deal in Virginia* (1983).
Suzanne Lebsock, *Virginia Women, 1600-1945* (1987).
Roland C. McConnell, *Three Hundred and Fifty Years* (1985).
Susan G. Pearl, *Prince George's County African-American Heritage Survey* (1996).
Vera F. Rollo, *The Black Experience in Maryland* (1980).
Helen C. Rountree, *Pocahontas's People* (1990).
Bruce G. Trigger, editor, *Northeast* (Vol. 15, Handbook of North American Indians,1978).
Edward C. Papenfuse, et al., *Maryland: A New Guide to the Old Line State* (1979).
Wilcomb E. Washburn, editor, *History of Indian-White Relations* (Vol. 4, Handbook of North American Indians, 1988).

Key economic studies include:

George H. Calcott, *Maryland and America, 1940-1980* (1985).
Joanne Passmore, *History of the Delaware State Grange and the State's Agriculture, 1875-1975* (1975).
Glenn Porter, editor, *Regional Economic History of the Mid-Atlantic Area Since 1700* (1976).
John R. Wennersten, *The Oyster Wars of Chesapeake Bay* (1981).

Useful analyses of regional scientific and technological developments during the period may be found in:

Larry S. Chowning, *Harvesting the Chesapeake* (1990).
David A. Hounshell, *From the American System to Mass Production, 1800-1932* (1984).

Surveys examining the region's built environment include:

Michael Bourne, et al., *Architecture and Change in the Chesapeake* (1998).
Henry Glassie, *Pattern in the Material Folk Culture of the Eastern United States* (1968).
Henry Glassie, *Folk Housing in Middle Virginia* (1975).
Gabrielle M. Lanier and Bernard L. Herman, *Everyday Architecture of the Mid-Atlantic* (1997).
Calder Loth, *Virginia Landmarks of Black History* (1995).
Norris F. Schneider, *The National Road, Main Street of America* (1975).

Archeological studies include:

William M. Kelso and R. Most, editors, *Earth Patterns* (1990).
Paul A. Shackel and Barbara J. Little, *Historical Archaeology of the Chesapeake, 1784-1994* (1994).
----, et al., editors, *Annapolis Pasts* (1998).

Among the many studies focusing on the development of Washington D.C. as a cosmopolitan international center are:

Constance M. Green, *Washington: A History of the Capital, 1879-1950* (1962).
Frederick A. Gutheim, *Worthy of the Nation* (1977).
Fredric M. Miller and Howard Gillette Jr., *Washington Seen: A Photographic History, 1875-1965* (1995).